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PATENT  
Attorney Docket No.: 014939-004800US

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450



On October 17, 2005

TOWNSEND and TOWNSEND and CREW LLP

By:

Jennifer K. Hardin  
Jennifer K. Hardin

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of:

Stephen E. Derenzo et al.

Application No.: 10/662,944

Filed: September 15, 2003

For: CODOPED DIRECT-GAP  
SEMICONDUCTOR SCINTILLATORS

Customer No.: 20350

Examiner: Carol M. Koslow

Art Unit: 1755

Confirmation No.: 2024

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR §1.97 and  
§1.98

Mail Stop: AF  
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Alexandria, VA 22313-1450

Sir:

The references cited on attached form PTO/SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed.

It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

10/20/2005 MAHMEDI 00000064 201430 10662944

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Appln. No. 10/662,944  
IDS dated October 17, 2005

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

This IDS is being filed before the mailing date of the final Office Action or Notice of Allowance.

Please charge the IDS fee of \$180 to Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Babak Kusha  
Reg. No. 51,095

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60611859 v1


Substitute for form 1449B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	10/662,944
				Filing Date	September 15, 2003
				First Named Inventor	Derenzo, Stephen E.
				Art Unit	1755
				Examiner Name	Carol M. Koslow
Sheet	1	of	1	Attorney Docket Number	014939-004800US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T <sup>2</sup>
	AA	W. Lehman, entitled: "Edge Emission of <i>n</i> -Type Conducting ZnO and CdS", <i>Solid -State Electronics</i> , Pergamon Press 1966, Vol. 9, pp. 1107-1110		
	AB	W. Lehman, entitled: "Optical Absorption Edges of ZnO and CdS", <i>Journal of the Electrochemical Society</i> , November 1965, Vol. 112, No. 11, pp1150-1151		
	AC	D. Luckey, entitled "A Fast Inorganic Scintillator", <i>Nuclear Instruments and Methods</i> , Vol. 62 (1968), 119-120		
	AD	Ruiping Wang and Arthur W. Sleight, entitled: "High Conductivity in Gallium-Doped Zinc Oxide Powders", <i>Chem. Mater.</i> , 1996, Vol. 8, 433-439		
	AE	K. Thonke et al., entitled: "Donor-acceptor pair transitions in ZnO substrate material", <i>Physica B</i> , 308-310 (2001) 945-948		
	AF	S. B. Zhang et al., entitled: "Intrinsic <i>n</i> -type versus <i>p</i> -type doping asymmetry and the defect physics of ZnO", <i>Physical Review B</i> , Vol. 63, 075205		
	AG	P. J. Simpson et al., entitled "Superfast timing performance from ZnO scintillators", <i>Nuclear Instruments and Methods in Physics Research A</i> , Vol. 505 (2003), 82-84		

Examiner Signature		Date Considered	
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\* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Effective on 12/08/2004. Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).		<b>Complete if Known</b>	
 <h1 style="margin: 0;">FEE TRANSMITTAL</h1> <h2 style="margin: 0;">For FY 2005</h2>		Application Number	10/662,944
		Filing Date	September 15, 2003
		First Named Inventor	Derenzo, Stephen E.
		Examiner Name	Carol M. Koslow
		Art Unit	1755
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Attorney Docket No.	014939-004800US
TOTAL AMOUNT OF PAYMENT		(\$ ) 180	

**METHOD OF PAYMENT (check all that apply)**

☐ Check    ☐ Credit Card    ☐ Money Order    ☐ None    ☐ Other (please identify): \_\_\_\_\_  
☒ Deposit Account    Deposit Account Number: 20-1430    Deposit Account Name: Townsend and Townsend and Crew LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☒ Charge fee(s) indicated below    ☐ Charge fee(s) indicated below, except for the filing fee  
☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17    ☒ Credit any overpayments

**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038

**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Small Entity		Small Entity		Small Entity		
	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Small Entity	
	Fee (\$)	Fee (\$)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

**Total Claims**    **Extra Claims**    **Fee (\$)**    **Fee Paid (\$)**    **Multiple Dependent Claims**  
 \_\_\_\_\_ - 20 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_  
 HP = highest number of total claims paid for, if greater than 20  
**Indep. Claims**    **Extra Claims**    **Fee (\$)**    **Fee Paid (\$)**  
 \_\_\_\_\_ - 3 or HP = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_  
 HP = highest number of independent claims paid for, if greater than 3

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

**Total Sheets**    **Extra Sheets**    **Number of each additional 50 or fraction thereof**    **Fee (\$)**    **Fee Paid (\$)**  
 \_\_\_\_\_ - 100 = \_\_\_\_\_ / 50 = \_\_\_\_\_ (round up to a whole number) x \_\_\_\_\_ = \_\_\_\_\_

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other: Submission of Information Disclosure Stmt

Fees Paid (\$)

180

**SUBMITTED BY**

Signature	<i>Babak Kusha</i>	Registration No. (Attorney/Agent)	51,095	Telephone	925-472-5000
Name (Print/Type)	Babak Kusha			Date	10/17/05